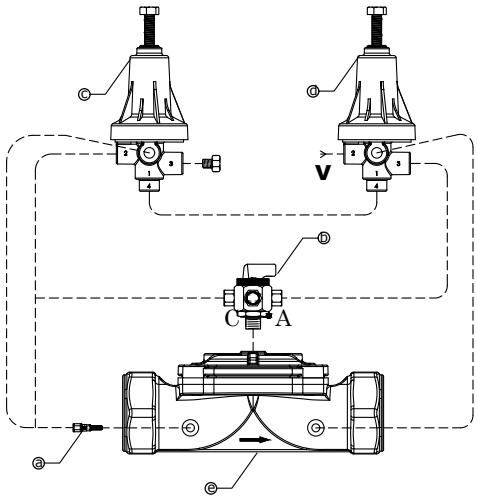
CONTROL VALVES

510 Series Globe Type Control Valves

Pressure Stabilization Pressure Reducing Control Valve



Technical Drawing



a) Finger Filter
b) 3-Way Selector Valve
c) Pressure Stabilization Pilot
d) Pressure Reducing Pilot
e) Body

Product Description

The BKV 510 Series pressure stabilizing and pressure reducing control valves are control valves that stabilize the inlet pressure and reduce the outlet pressure to the desired value. The valve has two pilot mechanisms. The first pilot mechanism is the pressure stabilizing mechanism, which stabilizes the valve inlet pressure, while the other pilot mechanism is the pressure reducing pilot mechanism, which reduces the outlet pressure to the desired value and keeps it constant. Pressure stabilizing and pressure reducing control valves regulate excessive flow and high pressure in pumping systems that pump from top to bottom or bottom to top, ensuring the system operates at normal values. The valve continuously monitors and maintains the inlet and outlet pressure values regardless of fluctuating flow or variable fluid pressure.

Production Standards

DN50 ⟹ DN80	
Pressure Range	1 bar ⟹ 10 bar
Connection	Flanged EN1092-2
Paint	Electrostatic Powder Coating
Temperature	-10 °C +80 °C

Features

- The diameter of the pressure reducing valve must be the same as the line diameter.
- During product ordering, information regarding maximum flow rate, operating pressure, line diameter, connection type, max. inlet pressure and desired outlet pressure value must be provided.
- Horizontal and vertical mounting is possible.
- The outlet pressure is kept constant at the desired value without being affected by inlet pressure fluctuations.
- Provides low pressure loss and regular flow.
- Operates with the pressure in the network or line and does not require extra energy.
- It is not affected by pressure and flow rate changes in the system.
- Maintenance can be performed without removing it from the pipeline.

Application Areas

- Agricultural irrigation
- Industrial applications
- Irrigation and drinking water systems

Adjustment

- Start the pump or open the main valve on the network to supply water to the system.
- Adjust the desired inlet pressure value by checking the pressure gauge using the adjustment bolt on the pressure stabilizing pilot valve indicated by "c".
- After determining the adjustment point, tighten the lock nut.
- Adjust the outlet pressure using the adjustment bolt on the pressure reducing pilot valve indicated by "d".

Working Principle

Closed position: The valve is closed by applying pressure to the diaphragm through fluid pressure.
Open position: Internal line pressure moves the diaphragm upwards, allowing flow.
Modulation position: The diaphragm remains in a fixed position by balancing the internal and external line pressures.



Diameter	2" DN50	2" 1/2" DN65	3" DN80
Code	GD10BSBD 50	GD10BSBD 65	GD10BSBD 80



Recommended Work Values

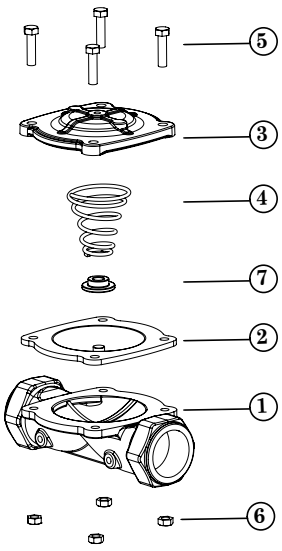
Working Pressure	Standard	1-16bar (15 - 232psi)
Temperature	Min.Operating Temperature	-10°C
	Max.Operating Temperature	+80°C
Connection	Flanged	EN 1092-2 ISO 7005-2
	Threaded	ISO (BSP) – ANSI (NPT)
Paint Coating	Standard	Polyester
	Optional	Epoksi

Globe Type Control Valves Size and Weight Table

DN		L		D		H		Weight	
inch	mm	inch	mm	inch	mm	inch	mm	lbs	kg
2"	50	8	205	6,5	165	6,5	165	18	8,5
2 ½"	65	8	205	7,3	185	7,3	185	22	10
3"	80	11,4	290	7,9	200	7,9	200	44	20

NOTE: Weight and valve height (h) do not include accessories.

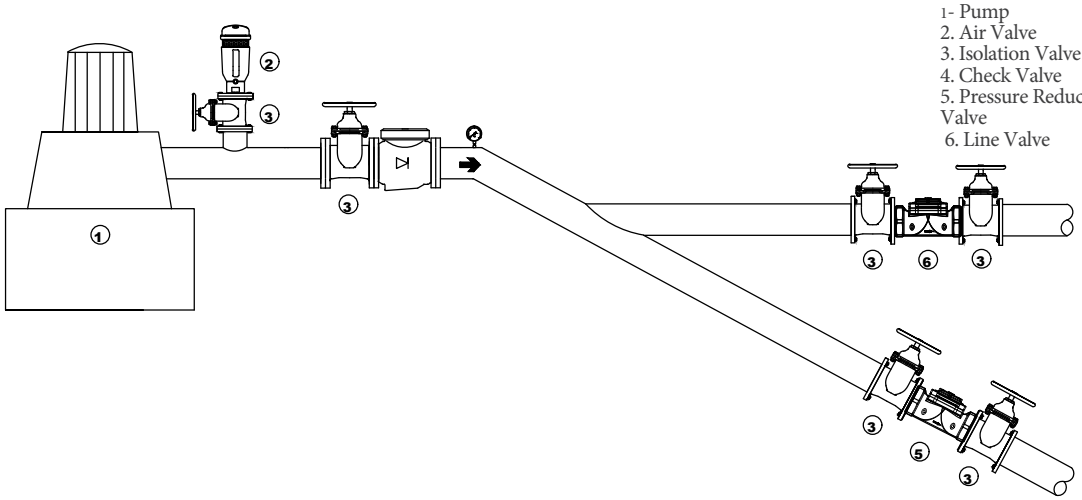
Main Parts



1	Body	GG 25 / GGG40 (EN-GJS 400-15)
2	Diaphragm	Court Fabric Reinforced Natural Rubber
3	Lid	GG 25 / GGG40 (EN-GJS 400-15)
4	Spring	Stainless
5	Bolt	Coated Steel
6	Nut	Coated Steel
7	Diaphragm Pressure Ring	Polyamid / Polyester

Maximum Working Pressure		Leakage Test Pressure		Body Test Pressure	
BAR	PSI	BAR	PSI	BAR	PSI
10	145	11	160	15	217
16	232	17,6	255	24	348

Example Application

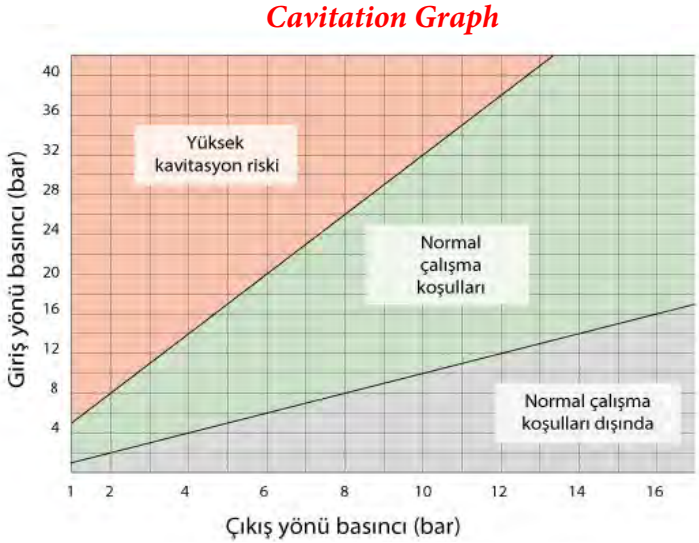


1- Pump
2. Air Valve
3. Isolation Valve
4. Check Valve
5. Pressure Reducing/Pressure Stabilizing Control Valve
6. Line Valve

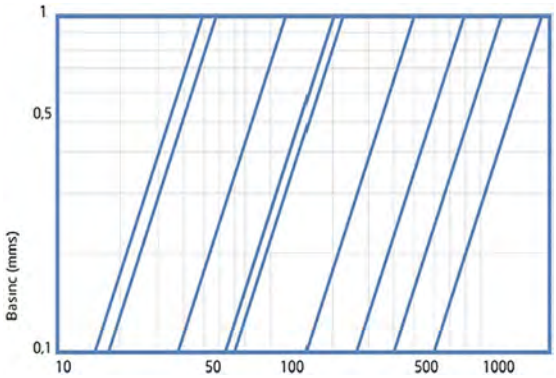
Flow Performance

Diameter	*mm*	*50*	*65*	*80*
	İnch	*2”*	*2½”*	*3”*
kv	*m³/h- 1 Bar*	*70*	*73*	*167*
		44	*46*	*96*

Cavitation Graph



Pressure Loss Graph



flow m³/ h